



Micro Commercial Components

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 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

DTA143XUA

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- Only the on/off conditions need to be set for operation, making device design easy
- Halogen free available upon request by adding suffix "-HF"

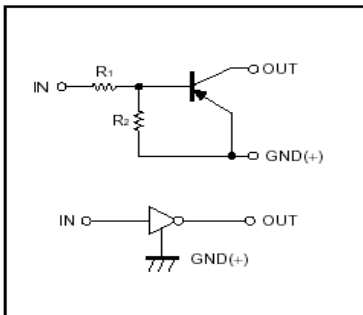
Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
V_{CC}	Supply voltage	---	-50	---	V
V_{IN}	Input voltage	-20	---	7	V
I_O	Output current	---	-100	---	mA
P_d	Power dissipation	---	200	---	mW
T_j	Junction temperature	---	150	---	°C
T_{stg}	Storage temperature	-55	---	150	°C

Electrical Characteristics @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage ($V_{CC}=-5V, I_O=-100\mu A$)	-0.3	---	---	V
$V_{I(on)}$	Input voltage ($V_O=-0.3V, I_O=-20mA$)	---	---	-2.5	V
$V_{O(on)}$	Output voltage ($I_O/I_I=-10mA/-0.5mA$)	---	-0.1	-0.3	V
I_I	Input current ($V_I=-5V$)	---	---	-1.8	mA
$I_{O(off)}$	Output current ($V_{CC}=-50V, V_I=0$)	---	---	-0.5	μA
G_1	DC current gain ($V_O=-5V, I_O=-10mA$)	30	---	---	
R_1	Input resistance	3.29	4.7	6.11	K Ω
R_2/R_1	Resistance ratio	1.7	2.1	2.6	
f_T	Transition frequency ($V_O=-10V, I_O=-5mA, f=100MHz$)	---	250	---	MHz

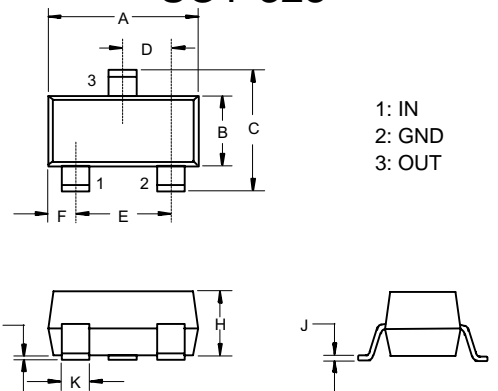
Equivalent circuit



*Marking: 33

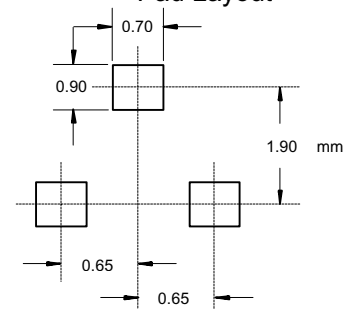
PNP Digital Transistors

SOT-323



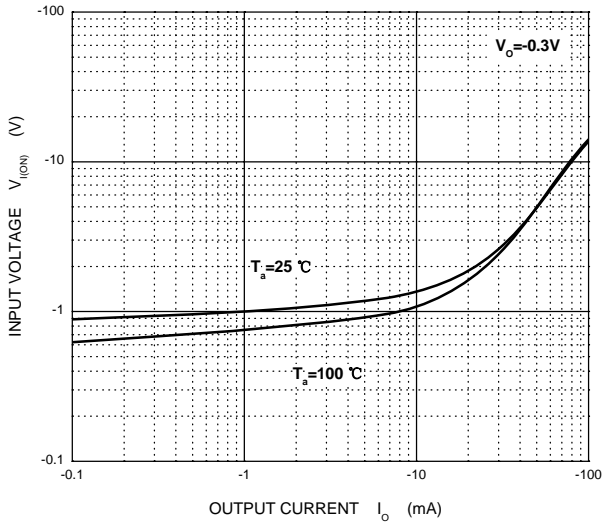
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

Suggested Solder Pad Layout

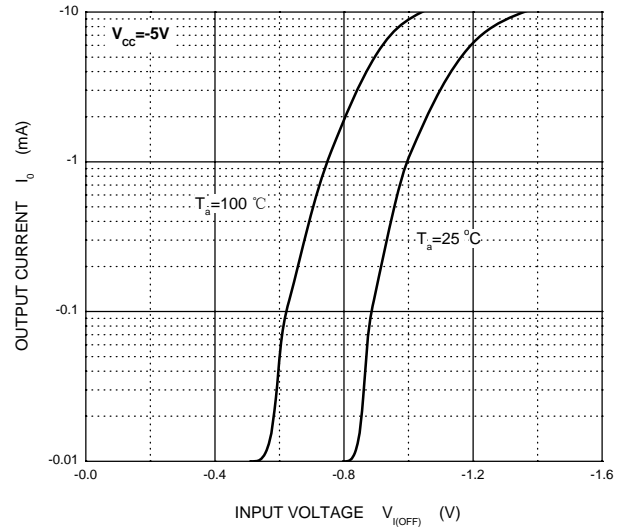


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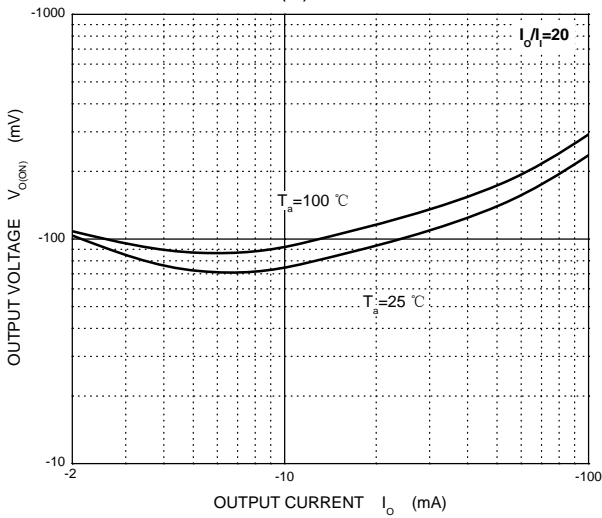
ON Characteristics



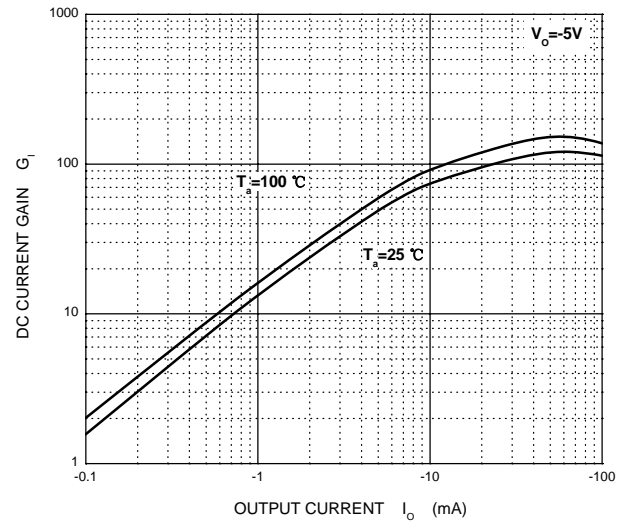
OFF Characteristics



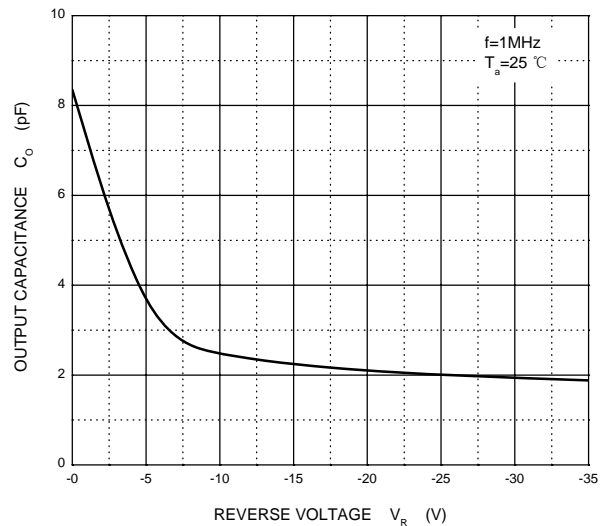
$V_{o(ON)}$ — I_o



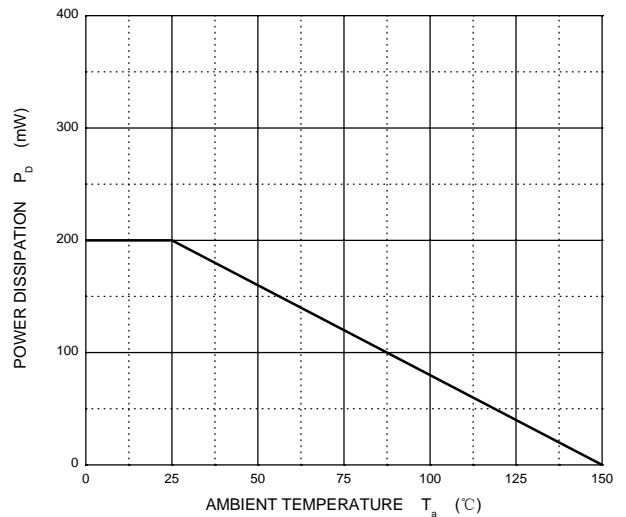
G_i — I_o



C_o — V_R



P_D — T_a





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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